

Notice of Allowability	Application No.	Applicant(s)	
	09/416,414	BHANDARI ET AL.	
	Examiner	Art Unit	
	Ella Colbert	3624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 01 July 2005.
2. ☒ The allowed claim(s) is/are 29-96.
3. ☒ The drawings filed on 12 October 1999 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413)
Paper No./Mail Date <u>7-19-05</u> |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

E. Colbert

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DETAILED ACTION

1. Claims 29-96 are pending in this communication filed 07/01/05 entered as Miscellaneous Incoming Letter.
2. The Restriction Requirement of 06/09/05 is hereby withdrawn.
3. The Affidavit(s) (Rule 131 or 132) or Exhibit(s) received 02/11/05 have been reviewed and entered.

Allowable Subject Matter

4. Claims 29-96 are allowed.
5. The following is an examiner's statement of reasons for allowance: claim 1 having a computer-implemented method of finding queries with the greatest-valued or least valued results, computing the result of a computation for an attribute-valued string associated with each query in a set of related queries, comparing the results associated with the set of queries to determine one or more queries having the greatest-valued result or one or more queries having the least-valued result; selecting the pre-computed greatest-value list and the pre-computed least-valued list associated with at least one computation of the user query, determining queries in the selected pre-computed least-value and greatest-value list sharing one or more elements in common with the user query to provide one or more queries having corresponding greatest-valued and least-valued results to provide a set of maximum and minimum queries in claim 50; computing a result of the first computation for the attribute-valued string associated with each query in the set of related queries, comparing the results associated with the set of related queries to determine one or more queries having the greatest-valued result or

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one or more queries having the least-valued result, and assigning another computation from the plurality of computations as the first computation in claim 54; a comparator for comparing the results associated with the set of related queries to determine one or more queries having the greatest-valued result or one or more queries having the least-valued result in claims 57, 93, and 96; and a computing device for determining queries in the selected pre-computed greatest-valued list sharing one or more elements in common with the user query to provide a set of maximum queries and determining queries in the selected pre-computed least-valued list sharing one or more elements in common with the user query to provide a set of minimum queries in claim 76 in conjunction with the other claim limitations was not disclosed by, would not have been obvious over, nor fairly suggested by the prior art of record.

6. The dependent claims 30-49, 51-53, 55, 56, 58-75, 77-92, 94, and 95 being further limiting to the independent claims, definite and fully enabled by the Specification are also allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Thai (US 5,666,528) disclosed the optimization of database queries.

Bohm et al (US 5,404,507) disclosed searching for records of database items and automatically creating database queries.

Herman, Gary; Gopal, Gita; Lee, K.C.; and Weinrib, Abel (ACM 1987) disclosed a nested-loop join algorithm for query processing.

Bowen, T.F.; Gopal, G.; Herman, G.; Hickey, T.; Lee, K.C.; Mansfield, W. H.; and Raitz, J.; and Weinrib, A. (ACM 1992) disclosed a model that represents the interest and relevance values of different concepts as specified by a user and filtering and extracting information.

Han, Jiawei (ACM March 1998) disclosed On-Line Analytical Mining (OLAP) for multi-dimensional analysis of data warehouses.


Inquiries

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ella Colbert whose telephone number is 571-272-6741. The examiner can normally be reached on Monday-Thursday, 6:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent Millin can be reached on 571-272-6747. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


E. Colbert
July 19, 2005

VINCENT MILLIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3600

